

Appl. No.: 09/844,947  
Amdt. Dated: 23 May 2007  
Reply to Office Action of: March 12, 2007

### REMARKS/ARGUMENTS

#### 1. Oath/Declaration

Acknowledgement has not been made as to the acceptance of the Declaration filed December 21, 2006.

#### 2. Drawings

Applicants thank the Examiner for indicating in the form PTO-948 dated May 13, 2004 that the formal drawings previously submitted have been approved.

#### 3. Specification

The specification has been amended by incorporation of the language of original claim 13 into the paragraph on page 3, lines 2-13. Since this language appeared in the claims of the specification as-filed, applicants submit that this amendment does not introduce new subject matter into the specification.

#### 3. Claims

Claims 1, 2, 4, 9, 13, 15, 20, 21, 23 and 24 remain in the application. The independent claim is claim 1. Claims 2, 4, 9, 13, 15, 20, 21, 23 and 24 depend on claim 1 either directly or indirectly by means of an intervening dependent claim.

Claim 1, line 7, has been amended herein to read "~~a column of solid~~ columnar porous preform" as described in the Specification on page 5, lines 5-6; and has been further amended by deletion of the word 'successively' from the phrase "~~successively~~ translating". Claim 1 has further been amended as follows (insertions underlined, deletions struck through)

"... depositing the particles of silica and titania on a deposition surface at a temperature below ~~a minimum temperature at which the particles can consolidate~~ that temperature required to consolidate the porous preform into dense glass ..."

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Applicants believe that the foregoing amendments overcome the Examiner's rejection described below regarding the use of the word "while" and "successively" following one another. Further, there is

### 3. § 112 Rejections

The Examiner has rejected claims 1, 2, 4 – 9, 13, 15, 20, 21, 23, and 24 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirements for reasons set forth in the Office Action.

Regarding the Examiner's rejection of the phrases "a column of solid porous perform" and "successively translating," applicants submit that these rejections are moot in view of the amendments submitted herein (insertions underlined, deletions struck through) so that these phrases read "~~a column of solid~~ columnar porous perform" and "~~successively~~ translating," respectively. [See further comments in the second paragraph below.]

Regarding the Examiner's rejection of the phrase "a deposition surface at a temperature below a minimum temperature at which the particles can consolidate," this amendment is believed moot in view of the amendment to claim 1 and the specification, both of which use the language of original claim 13 in the application as-filed.

Regarding the Examiner statements concerning use of "while" and "successively" together, applicants submit that this rejection is not moot in view of the amendment described above in which the word "successively" was deleted. Using Figure 1 and the specification at page 4, lines 15-24, and page 5, lines 1-13, it is clear to one skilled in the art that during the deposition process the bait 34 on spindle 36 are "translated" or moved upward.

Finally, the Examiner states that the particles could not stick together if the temperature were as low as applicants' claims. This is interpreted as saying that the particles would not stick together at temperatures below consolidation temperatures. However, This is exactly what applicants' specification teaches; namely, that one can form a preform at temperatures below consolidation temperatures. Applicants refer the Examiner to the specification at page 3, lines 8-9 in which applicants state:

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Consolidating the glass in a separate step eliminates the need to capture the soot at consolidation temperatures."

The Examiner also states that something that not be both "solid porous." The Examiner is in error with this statement. Molecular sieves are a well known "solid porous" materials. Applicants submit that these grounds for rejection should properly be dismissed.

The Examiner also states that applicant has acquiesced that there is no support for claims 20 and 21. Applicants traverses. Claims 20 and 21 are as follows.

20. (previously presented) The method of claim 1, wherein the minimum temperature is approximately 1200°C.

21. (previously presented) The method of claim 20, wherein the temperature at which the particles are deposited is approximately 200 to 500°C less than the minimum temperature.

Regarding claim 20, applicants refer the Examiner to the Specification on page 5, lines 16-18, in which applicants indicate that consolidation temperatures are "typically in the range of 1200 to 1900 °C." The lower temperature is 1200 °C. Those skilled in the art would understand that 1200 °C would be the minimum consolidation temperature. Applicants also refer the Examiner to page 3, lines 5-7 which indicate (1) that performing consolidation in a separate step allow eliminates the need to capture soot at consolidation temperatures and (2) that this allows the soot to be deposited at lower temperatures, typically 200 to 500 °C lower than in conventional boule processes. Applicants submit that the specification supports both claims 20 and 21 and that one skilled in the art would understand this and would understand exactly what these claims mean.

**THEREFORE**, in view of the foregoing amendments and the comments offered herein, applicants submit that the foregoing 35 U.S.C. § 112, first paragraph, rejection of claims 1, 2, 4-9, 13, 15, 20, 21, 23, and 24, as they may have been amended herein for clarity, may properly be withdrawn.

The Examiner has rejected claims 1, 2, 4 – 9, 13, 15, 20, 21, 23, and 24 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out

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and distinctly claim the subject matter with applicants regards as the invention.  
Applicants traverse the rejection.

Applicants submit that the rejections given under 35 U.S.C. § 112, second paragraph, are moot in view of the amendments made to the specification, for clarity, and the arguments given above which are incorporated herein in their entirety.

#### 4. Conclusion

Based upon the above amendments, remarks, and papers of record, Applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests reconsideration of the pending claims and a prompt Notice of Allowance thereon.

Applicants hereby respectfully request that in the event that an extension of time is required to make this response timely, that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Walter M. Douglas at 607-974-2431.

23 May 2007  
Date

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8	
I hereby certify that this paper and any papers referred to herein are being transmitted by facsimile to the U.S. Patent and Trademark Office at 571-273-8300 on:	
<u>23 May 2007</u> Date	
<u>Walter M. Douglas</u> Walter M. Douglas	<u>23 May 2007</u> Date

Respectfully submitted,  
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